

### Activity 3

```
PS C:\Users\Larry> docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
7e83564854d0   ubuntu:16.04   "/bin/bash"             43 minutes ago Exited (0) 34 minutes ago           hopeful_raman
PS C:\Users\Larry> docker rm 7e8
7e8
PS C:\Users\Larry> docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
PS C:\Users\Larry> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
lsgarriz/ping latest    aecc1a51445b   24 minutes ago 170MB
ubuntu        16.04     9ff95a467e45   3 weeks ago   135MB
PS C:\Users\Larry> docker rmi aecc
Untagged: lsgarriz/ping:latest
Deleted: sha256:aecc1a51445b073bc64add1588372f4d1fe9989c310ec286c0653fe5bd78df52
Deleted: sha256:9c447b229597ad87180e5e3f999933c23a0cecd532d70290aefa8fcddd525d43
PS C:\Users\Larry> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ubuntu        16.04     9ff95a467e45   3 weeks ago   135MB
```

Deletion of exercise 2 files

```
Dockerfile M x  Release Notes: 1.57.0
C: > Users > Larry > Documents > GitHub > ME8_Containerization_and_Docker > 3-building_images > Dockerfile
1 FROM ubuntu:16.04
2 LABEL author="Larry Garriz"
3
4 RUN apt-get update
5 RUN apt-get install -y iputils-ping
6
```

Creation of initial Dockerfile

```
Select Windows PowerShell
PS C:\Users\Larry\Documents\GitHub\ME8_Containerization_and_Docker\3-building_images> docker build -t 'garriz/ping' .
[+] Building 0.1s (7/7) FINISHED
=> [internal] load build definition from Dockerfile
=> [internal] load .dockerignore
=> [internal] transfer build context
=> [internal] load metadata for docker.io/library/ubuntu:16.04
=> [1/3] FROM docker.io/library/ubuntu:16.04
=> CACHED [2/3] RUN apt-get update
=> CACHED [3/3] RUN apt-get install -y iputils-ping
=> exporting to image
=> exporting layers
=> writing image manifest to local storage
=> pushing to docker.io/garriz/ping

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS C:\Users\Larry\Documents\GitHub\ME8_Containerization_and_Docker\3-building_images> docker build -t 'garriz/ping' .
[+] Building 0.1s (7/7) FINISHED
=> [internal] load build definition from Dockerfile
=> [internal] load .dockerignore
=> [internal] transfer build context
=> [internal] load metadata for docker.io/library/ubuntu:16.04
=> [1/3] FROM docker.io/library/ubuntu:16.04
=> CACHED [2/3] RUN apt-get update
=> CACHED [3/3] RUN apt-get install -y iputils-ping
=> exporting to image
=> exporting layers
=> writing image manifest to local storage
=> pushing to docker.io/garriz/ping

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS C:\Users\Larry\Documents\GitHub\ME8_Containerization_and_Docker\3-building_images> docker images
REPOSITORY      TAG         IMAGE ID      CREATED       SIZE
garriz/ping      latest      14cf9306d808  9 hours ago  170MB
ubuntu          16.04      9ff95a467e45  3 weeks ago  135MB
PS C:\Users\Larry\Documents\GitHub\ME8_Containerization_and_Docker\3-building_images>
```

(Highlighted for readability) Building the Dockerfile. On PowerShell, the output appears to be less verbose than as described in the README. Additionally, running the command again gives an identical output with no indication of the described caching behavior.

```
File Edit Selection View Go Run Terminal Help Dockerfile - Visual Studio Code
Restricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More

Dockerfile M x Release Notes: 1.57.0
C: > Users > Larry > Documents > GitHub > ME8_Containerization_and_Docker > 3-building_images > Dockerfile
1 FROM ubuntu:16.04
2 LABEL author="Larry Garriz"
3
4 RUN apt-get update
5 RUN apt-get install -y iputils-ping
6 RUN apt-get clean \
7     && cd /var/lib/apt/lists && rm -fr *Release* *Sources* *Packages* \
8     && truncate -s 0 /var/log/*log
9

Restricted Mode 201461049_feature_activity03* 0 0 0
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS C:\Users\Larry\Documents\GitHub\ME8_Containerization_and_Docker\3-building_images> docker images
REPOSITORY      TAG         IMAGE ID      CREATED       SIZE
garriz/ping      latest      b9c0281e7d3d  4 seconds ago  170MB
<none>           <none>      14cf9306d808  9 hours ago  170MB
ubuntu          16.04      9ff95a467e45  3 weeks ago  135MB
PS C:\Users\Larry\Documents\GitHub\ME8_Containerization_and_Docker\3-building_images>
```

No improvement after initial addition of apt-get clean

The screenshot shows the Visual Studio Code interface with a Dockerfile open in the editor. The Dockerfile contains the following commands:

```
1 FROM ubuntu:16.04
2 LABEL author="Larry Garriz"
3
4 RUN apt-get update \
5     && apt-get install -y iputils-ping \
6     && apt-get clean \
7     && cd /var/lib/apt/lists && rm -fr *Release* *Sources* *Packages* \
8     && truncate -s 0 /var/log/*log
9
```

The output window at the bottom shows the command `docker images` being executed, displaying a table of images:

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
garriz/ping	latest	977b103cb116	5 seconds ago	139MB
<none>	<none>	b9c0281e7d3d	3 minutes ago	170MB
<none>	<none>	14cf9306d808	9 hours ago	170MB
ubuntu	16.04	9ff95a467e45	3 weeks ago	135MB

Reduced file size after collapsing the RUN command

The screenshot shows a Windows PowerShell terminal window with the following output:

```
PS C:\Users\Larry\Documents\GitHub\ME8_Containerization_and_Docker\3-building_images> docker run -it garriz/ping
PING google.com (216.58.220.206) 56(84) bytes of data:
64 bytes from 216.58.220.206: icmp_seq=1 ttl=37 time=50.2 ms
64 bytes from 216.58.220.206: icmp_seq=2 ttl=37 time=41.7 ms
64 bytes from 216.58.220.206: icmp_seq=3 ttl=37 time=45.4 ms
64 bytes from 216.58.220.206: icmp_seq=4 ttl=37 time=42.0 ms
64 bytes from 216.58.220.206: icmp_seq=5 ttl=37 time=40.8 ms
64 bytes from 216.58.220.206: icmp_seq=6 ttl=37 time=40.1 ms
^C
--- google.com ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5007ms
rtt min/avg/max/mdev = 40.126/43.405/50.285/3.501 ms
PS C:\Users\Larry\Documents\GitHub\ME8_Containerization_and_Docker\3-building_images>
```

Successful use of ENV and CMD directives